NEBRASKA
EMERGENCY MEDICAL SERVICES
MODEL PROTOCOLS
Pain Management Protocol Revision

SERVICE NAME

With the approval of the Physician Medical Director, the service has adopted the following protocols

_____
Date Approved

_____ _____
Physician Medical Director Agency Head

Protocol Addendum Instructions

This Protocol is designed to replace the Pain Management Protocol (Page AP-20) Dated 1/22/2007 – Revised 2/26/2010 – Revised 7/19/2012.

This Protocol is intended to allow the Physician Medical Director and the Service maximum flexibility in pain management.

Pain Management Protocol
Revision July 19, 2012

Emergency Medical Responder, EMT

Unless Otherwise Contraindicated Because of Trauma Place Patient in Position of Comfort
Apply Splint to Extremity Deformities
Apply Ice and Elevate Extremity to Reduce Pain

EMT Options/ EMT Intermediate 85

IV Establish IV Access

EMT-Intermediate 99

Consider Morphine 2-5 mg IV or IM [Pediatric Dose 0.1-0.2 mg/kg]
May Repeat in 2mg Doses Until Pain Control or 10mg Total and BP Remains >100 Systolic
May consider Morphine via Mucosal Atomization Device (MAD) same dose as for IV
Administer no more than 1cc of total volume per nostril.

EMT-I Pain Management Procedure

Assess and Monitor
• Vital Signs
  ○ Pulse, BP, Respiratory Rate
  ○ Pulse Oximetry
  ○ Consider
  ▪ Electronic EtCO2and Cardiac Monitor
• Pain Level

Preparation • Evaluate patient for potential of difficult airway • Have Intubation Equipment and Supplies Available • Have Alternate Non-visualized Advanced Airway Available • Have Suction Available • Have Naloxone Available
Oxygenation • Deliver Oxygen to Maintain O2 Saturations of 94% to 99%

Medication Administration
• Administer Morphine
  ○ Adult - 2 -5mg IV/IO/ IM or MAD
  ○ Pediatric - 0.1 mg/kg to max 5mg IV/IO/ IM/MAD

Reassess
• Vital Signs
  ○ Pulse, BP, Respiratory Rate
  ○ Pulse Oximetry
  ○ Consider
  ▪ Electronic EtCO2and Cardiac Monitor
• Pain Level

Re- Dose For Desired Effect
• Titrate Morphine
  ○ Adult – 2mg IV/IO/ IM or MAD
  ○ Pediatric - 0.1 mg/kg to max 2mg IV/IO/ IM/MAD

Reassess and Re-Dose
Goal – Reduction of Pain Not Necessarily Elimination of Pain

Paramedic

The Paramedic may consider minimal to moderate sedation in conjunction with an analgesic to manage the patient's pain OR analgesic only to manage the pain's pain. When utilizing sedation with other then benzodiazepines and analgesia the paramedic will have completed education including but limited to;

- Sedative classes listed in these protocols and their similar characteristics of each class
- Indication, contra-indications dosing of each of the medications
- Review of the indications of minimal and moderate sedation
- Review of indications of heavy sedation requiring actions to manage patient through a heavy sedation situation

Pain Management Protocol
Revision July 19, 2012

Minimal Sedation Means
The patient responds normally to verbal commands. Cognitive function and coordination may be impaired, but respiratory and cardiovascular functions are unaffected.

Moderate Sedation Means
The patient responds purposefully to verbal commands alone or when accompanied by light touch. Protective airway reflexes and adequate ventilation are maintained without intervention. Cardiovascular function remains stable.

Sedation and Analgesic Option Procedure	**Analgesic Only Option Procedure**

Assess and Monitor
• Vital Signs
  o Pulse, BP, Respiratory Rate
  o Pulse Oximetry
  o Electronic EtCO2
  o Cardiac Rhythm
• Pain Level
	Assess and Monitor
	• Vital Signs
	  o Pulse, BP, Respiratory Rate
	  o Pulse Oximetry
	  o Consider
	  ▪ Electronic EtCO2and Cardiac Monitor
	• Pain Level

Preparation • Evaluate patient for potential of difficult airway • Have Intubation Equipment and Supplies Available • Have Alternate Non-visualized Advanced Airway Available • Have Suction Available • Have Naloxone Available	Preparation • Evaluate patient for potential of difficult airway • Have Intubation Equipment and Supplies Available • Have Alternate Non-visualized Advanced Airway Available • Have Suction Available • Have Naloxone Available
Oxygenation • Deliver Oxygen to Maintain O2 Saturations of 94% to 99%	Oxygenation • Deliver Oxygen to Maintain O2 Saturations of 94% to 99%

Medication Administration
• Administer Sedative *See Approved Sedative Chart
• Administer Analgesic*See Approved Analgesic Chart
• Consider Anti-Emetic
  o ***Preferred***
  ▪ Ondansetron(Zofran)
  ▪ Dolasetron (Anzemet)
  o ***Acceptable But Monitor For EPR and Cardiac Effects***
  ▪ Promethazine(Phenergan)
  ▪ Prochlorperazine(Compazine)
	Medication Administration
	• Administer Analgesic*See Approved Analgesic Chart
	• Consider Anti-Emetic
	  o ***Preferred***
	  ▪ Ondansetron(Zofran)
	  ▪ Dolasetron (Anzemet)
	  o ***Acceptable But Monitor For EPR and Cardiac Effects***
	  ▪ Promethazine(Phenergan)
	  ▪ Prochlorperazine(Compazine

Reassess
• Vital Signs
  o Pulse, BP, Respiratory Rate
  o Pulse Oximetry
  o EtCO2
  o Cardiac Rhythm
• Adjust Oxygen Delivery as Needed
• Pain Level
	Reassess
	• Vital Signs
	  o Pulse, BP, Respiratory Rate
	  o Pulse Oximetry
	  o Consider
	  ▪ Electronic EtCO2and Cardiac Monitor
	• Pain Level

Re-Dose For Desired Effect • Titrate Sedative • Titrate Analgesic	Re-Dose For Desired Effect o Titrate Analgesic
Reassess and Re-Dose	Reassess and Re-Dose
Goal • Obtain Minimal to Moderate Sedation Level Using The Least Amount of Medication • Reduction of Pain	Goal • Reduction of Pain Not Necessarily Elimination of Pain

Pain Management Protocol
Revision July 19, 2012

Paramedic

Approved Sedative Chart

**Use lowest dose in the elderly or patients with impaired hepatic and or renal function

Medication Name Generic (Brand Name)	Adult Dose	Pediatric Dose *Maximum Dose Not to Exceed Adult Dose	Special Information
Benzodiazepine Class			
Diazepam (Valium)	2.0- 4.0mg IV/IO/Rectal May repeat to maintain sedation	0.04 -0.2 mg/kg IV./IO/ Rectal (6 Mo to 12 years) May repeat to maintain sedation	Reversal Agent – Flumazenil (Romazicon) Use with caution as rapid reverse may lead to seizures especially in patient with history of seizures
Lorazepam (Ativan)	0.5 - 1.0mg IV/IO May repeat to maintain sedation *Approved to be given by MAD but due to viscosity of may be an ineffective method of administration	0.05 mg/kg (6 Mo to 12 years) May repeat to maintain sedation	
Midazolam (Versed)	1.0- 2.0mg IV/IO/MAD May repeat to maintain sedation	0.1 mg/kg (6 Months and Older) May repeat to maintain sedation	
Carboxylated Imidazole Derivative Class ***Most Preferred Alternative to Benzodiazepine Class for Adult Sedation*** ***Acceptable Alternative to Benzodiazepine Class for Certain Pediatric Patients***			
Etomidate	0.1 – 0.15 mg/kg IV/IO 0.05 mg/kgevery 3 to 5minutes to maintain sedation	0.1 -0.2 mg/kg IV/IO 0.05 mg/kg every 3 to 5 minutes to maintain sedation	Avoid if patient 10 years old or younger May cause adrenal suppression
NMDA Receptor Antagonist Class ***Most Preferred Alternative to Benzodiazepine Class for Pediatric Sedation- Acceptable Alternative to Benzodiazepine Class for Adult Sedation***			
Ketamine	1.5– 2.0mg/kg IV/IO 0.25-0.5 mg/kg every 5 to 10 minutes to maintain sedation	2-4 mg/kg IV/IO/IM (6 Months and Older) 0.25-0.5 mg/kg every 5 to 10 minutes to maintain sedation	Consider Atropine for increased secretions 0.02 mg/kg with a minimal dose of 0.1 mg and amaximum of 0.5 mg for Pediatric 0.5mg Single Dose for Adults
Phenothiazine Class ***Least Desirable Alternative- Reserved To Incidents When No Other Alternatives Are Available***			
Prochlorperazine (Compazine)	5mg IV/IO May Repeat Once	Not Approved May cause dystonic reactions	Use Lowest possible dose to prevent extrapyramidal reactions For EPR consider Diphenhydramine (Benadryl) 12.5 to25mg Peds 25 to50mg Adults
Promethazine (Phenergan)	25 mg IV/IO May Repeat Once	Not Approved May cause dystonic reactions	

Pediatric Maximum Dose Not to Exceed Adult Dose

Pain Management Protocol
Revision July 19, 2012

Paramedic

Approved Analgesia Chart

Medication Name Generic Name (Brand Name)	Adult Dose	Pediatric Dose *Maximum Dose Not to Exceed Adult Dose	Special Information
Opioid Class			
Morphine	2-5mg IV/IO/IM/MAD	0.05 - 0.2mg/kg IV/IO/IM/MAD	Morphine Is The Most Preferred Opioid for Cardiac Chest Pain Reversal Agent for Opioid Class – Nalxone (Narcan)
Fentanyl	25 to 100 mcg IV/IO/IM/MAD	1.0 - 2.0 mcg/kg IV/IO/IM/MAD	
Hydromorphone (Dilaudid)	0.2 -0.6 mg IV/IO	0.03 to0.08mg/kg IV/IO Over 6 Months	
Nalbuphine (Nubain)	10 to 20mg IV/IO	0.05 to 0.1mg/kg IV/IO	
Butorphanol Tartrate (Stadol)	0.5mg to 2mg IV/IO/MAD	Not Approved Under Age 18	
Opioid Class ***Least Desirable Alternative-But Acceptable***			
Meperidine (Demerol)	50 – 100mg IV/IO/IM	1mg/kg IV/IO/IM	Reversal Agent – Nalxone (Narcan)
NSAID Class			
Ketorolac (Toradol)	15 to 30mg IV/IM *Preferred treatment for suspected Kidney Stone as a single medication or in conjunction with an opioid class medication	0.5mg/kg to maximum dose of 30mg	Defer in suspected CVA, GI Bleeding, or other indications internal bleeding and external bleeding not easily controlled with direct pressure

Pediatric Maximum Dose Not to Exceed Adult Dose

Routes of Administration

IV – Intravenous
IO – Intraosseous
IM – Intramuscular
MAD – Mucosal Atomization Device